mean age of 65.9 (±10.5) years, 62.1% female, and 88.2% retired. Annual mean all-cause cost was $2,466 per patient with osteoporosis-related cost accounting for 53.8%. For osteoporosis-related health services, 33.2% of patients experienced ≥1 hospitalization with mean length of stay of 18.0 (±14.4) days and mean cost of $2,913 per admission, and 83.2% of patients experienced ≥1 outpatient visit with mean (±SD) number of visits 7.4 (±8.7) and mean cost $17 per visit. The medical device cost was the largest component (38.5%) of osteoporosis-related cost, followed by drug cost (31.1%) and examination cost (11.7%). The regression model revealed that osteoporosis-related cost tended to increase with age, patients with hip, vertebral, lower leg and multiple fractures were more likely to have a higher cost. **CONCLUSIONS:** Costs for patients with osteoporotic fractures were considerable in Tianjin China, driven mainly by osteoporosis-related hospitalizations. Efforts focused on reducing the utilization of inpatient services and increasing efforts to lower the fracture risks may have the potential to lighten the economic burden of osteoporotic fractures in China.

PMS46

COSTS OF ABSENTEEISM IN ANKYLOSING SPONDYLITIS BASED ON REAL-LIFE DATA FROM POLAND'S SOCIAL INSURANCE INSTITUTION DATABASE IN 2013

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OBJECTIVES: The aim of this study was to assess the indirect costs caused by absenteeism associated with ankylosing spondylitis (AS) from the perspective of the Social Insurance Institution (ZUS) in Poland. **METHODS:** The estimates were based on data from the year 2013 concerning absence from work due to the illness (sick leave) the amount of short-term disability, the sufferers of which claim rehabilitation benefit, and the amount of long-term disability (permanent or fixed time), the sufferers of which claim disability pension. Costs were calculated taking into account Gross Domestic Product (GDP) per capita equaled €10 278, Gross Value Added (GVA) per worker equaled €24 680 and Gross Income (GI) per worker equaled €7 339 were presented in 2013 prices. **RESULTS:** Total indirect costs of AS in the year 2013 calculated using GDP per capita, GVA and GI per worker in Poland were €24 416 394, €58 631 008 and €17 435 690, respectively. The highest component of indirect costs of AS was permanent long-term disability (68%). Sick leave and short-term disability costs constitute 12% and 4% of total indirect costs of AS, respectively. In 2013 Poland's Social Insurance Institution database reported 3 400 patients that had 7 137 sick leave episodes, 225 short-term disability episodes and 198 long-term disability episodes. Indirect costs per patient associated with sick leave were €894, €2 147 and €639 calculated using GDP, GVA and GI, respectively. Indirect costs per patient associated with short-term disability were €259, €622 and €185 respectively and associated with long-term disability were as high as €6 028, €14 474 and €4 304, respectively. **CONCLUSIONS:** AS in Poland generated high indirect costs. The main component was permanent long-term disability; short-term disability generated lower costs of lost productivity. The highest cost per patient was generated by permanent long-term disability.

PMS47

THE COST OF REHUMATOID DISEASES IN ITALY: ANALYSIS FROM AN ITALIAN ADMINISTRATIVE DATABASE

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OBJECTIVES: Chronic Inflammatory Rheumatic Diseases (CIRD), especially Rheumatoid Arthrits and Spondyloarthritis, are systemic inflammatory disorders significantly affecting patients' quality of life. Disability and comorbidity associated to such conditions trigger high costs for healthcare systems and society. This analysis aims to measure direct costs in patients receiving pharmacological treatment. **METHODS:** Using administrative healthcare claims from the Piedmont region in the North-West of Italy, we detected CIRD patients who, during the period Jan 2008 - Dec 2010, had >1 disease-modifying antirheumatic drug (DMARD) prescription, either synthetic (e.g. methotrexate) or biologic (e.g. infliximab). RD was confirmed if patients had >1 hospital diagnosis of CIRD (rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis, ICD-9 codes : 714.0, 696.0, 720.0) and/or an exemption code for similar diagnoses. Each patient was followed up from first DMARD prescription (index date) for three years or until death. **RESULTS:** In the selected period N=12,455 patients with CIRD diagnosis received DMARD. Patients were mainly female (58.1%), with a mean age of 55.3 (+17.4) years. Direct annual costs were €6,983, €4,974, €5,178, during Year 1, 2, 3. The composition of average annual costs was: €1,531 (26.8%) for hospital costs and emergency room costs, €163 (2.9%) for synthetic DMARDs, €2,188 (38.3%) for biologic DMARDs, €985 (17.2%) for concomitant medications, €845 (14.8%) for ambulatory visits. N=4,670 (37.5%) received biologic therapy during the follow-up. **CONCLUSIONS:** Chronic Inflammatory Rheumatic Diseases determine a relevant economic burden for healthcare services, because of significant epidemiological impact and high per-patient costs. Costs are significantly high at every stage of disease, both at time of diagnosis, and over time.

PMS48

BURDEN OF SPINAL DISEASES: RESULTS FROM REGISTER STUDY IN SWEDEN

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OBJECTIVES: The objective of this study was to estimate the direct and indirect costs of low back pain with/without radiant pain (LBP) in Sweden using the concept of "LBP-episode", and to identify the variation of these across different patients groups. **METHODS:** Patients visiting healthcare providers, or receiving health insurance benefits, with a LBP-diagnosis in the region of Västra Götaland in 2008-2012 were identified in the administrative database VEGA. Data from additional Swedish national registers including inpatient and outpatient care, drug prescriptions, socio-economics and social security were extracted. The burden was measured for "LBP-episodes", defined as time periods with consecutive visits to the healthcare system with a relevant diagnosis code, continuing until 6 months have elapsed without costs incurred by LBP-related visits. **RESULTS:** More than 72,000 patients were identified, with over 95,000 LBP-episodes. The average episode length was 56/176 days in episodes without/with surgery. The mean total cost per episode was estimated at €5,453, where indirect costs constituted 68.4%, medical visits including diagnostic imaging 14.5%, other inpatient care 8.2%, surgery 7.9%, and pharmaceuticals 1.0%. In men/women, the mean total cost per episode was estimated to €22,174/€24,833 in episodes with surgery, and €4,175/€3,957 in episodes without surgery. The total burden of LBP in Sweden in 2012 was estimated at €704M, with a burden per capita of €73. Higher age, women, comorbidities, surgery and less education were found to be significant predictors of higher costs. **CONCLUSIONS:** The societal burden of LBP is substantial and varies significantly between different types of patients. It is important to identify periods and interventions within a LBP-episode that can be relevantly adjusted in order to optimize cost-effectiveness of treatment, and also, to realize that results may be dependent on the time frame chosen for a LBP-episode. **Acknowledgements:** The study was financed with an unrestricted grant from Medtronic.

PMS49

YEARS OF WORKING LIFE LOST CAUSED BY OSTEOARTHRITIS IN PORTUGAL

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OBJECTIVES: The aim of this study was to calculate the years of working life lost (YWLL) from early exit from work associated with Osteoarthritis (OA). **METHODS:** We used data from the population-based EpiReumaPt study (Sep2011-Dec2013). 10,661 inhabitants were surveyed to capture all cases of RD within a representative sample of the Portuguese population. We analyzed all aged 50-65 years old (yo), near the official retirement age. YWLL were determined for OA cases with premature exit from work caused by RD (self-reported) estimated as the difference between each participant's age and the respective age ("observed stock"), while the potential YWLL (PYWLL: YWLL+"expected stock" of YWLL still to occur if there is no return-to-work) was the difference between official and actual retirement ages. We also calculated the percentage of time in inactivity (inactivity ratio=YWLL/Active age-range[15-65yo]). We excluded all OA participants with concomitant inflammatory rheumatic diseases with possible impact on retirement, such as rheumatoid arthritis and spondylarthritis. All cases with retirement prior to onset of OA symptoms were also excluded. All results were based on weighted data. **RESULTS:** The estimated prevalence of OA in the Portuguese population (50-64 yo) is 29.7% (knee:18.6%; hand:12.6%; hip:3.6%). Among these, 61.8% were out of work versus 47.6% for those without OA (p=0.004), which potentially led to 162,735 YWLL (95 per 1000 inhabitants). Early retirement contributed the most for these YWLL (58%; 94,432 YWLL), followed by unemployment (35%; 57,209 YWLL) and disability pensions (7%; 11,094 YWLL). Women accounted for 80% of these YWLL (153 per 1000 female inhabitants). A total of 161,621 PYWLL were estimated if early retirement is considered and 369,839 PYWLL for all forms of exit from work. The mean YWLL and PYWLL inactivity ratios were 16% and 30%, respectively. **CONCLUSIONS:** We estimated a considerable amount of working life years losses associated with OA in Portugal.

PMS50

PREDICTING THE FUTURE ECONOMIC BURDEN OF HIP FRACTURES IN NORWAY-THE IMPACT OF EPIDEMIOLOGICAL UNCERTAINTY

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OBJECTIVES: To estimate the economic burden of hip fractures in Norway under different assumptions on the future demographic and fracture rate development. **METHODS:** Based on population projections from Statistics Norway and estimated fracture rates, we projected the future number of hip fractures in the period 2014-2040. We projected assuming both a low, medium and high population increase. We estimated fracture rates based on data from the hip fracture database of the Norwegian Epidemiologic Osteoporosis Studies (NOREPOS), using data for the period 1999 to 2008. We predicted future fracture rates under three scenarios: assuming a constant future rate, assuming a continued decline in the fracture rate and assuming a continued, but somewhat reduced decline. We considered a medium population growth and a reduced decline as the most likely scenario. To the estimated number of fractures we added the cost of hip fracture surgery and other health and social care cost related to hip fractures from a recent Lancet publication. **RESULTS:** The projected future cost in the period from 2014 to 2040 varies from a 14% increase in the best-case scenario to 121% increase in cost in the worst-case scenario, with a 65% increase as the most likely estimate. From a hospital perspective, the costs could increase from €108M to either €119M in a best-case scenario or €235M in a worst-case scenario. If we include not only the cost of the primary hospitalization, but also the cost of other health and social services (e.g. long term nuring home care) related to the fracture, the cost impact will increase from €341M to €388M either or €766M **CONCLUSIONS:** Our study indicates that the number and cost of hip fractures is likely to increase until 2040, but the magnitude of the impact is very much dependent on demographic change and fracture rate development.

PMS51

THE ASSOCIATION BETWEEN DISEASE ACTIVITY AND INDIRECT COSTS OF ABSENTEEISM AND PRESENTEEISM GENERATED BY PATIENTS WITH ANKYLOSING SPONDYLITIS IN POLISH POPULATION

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